For More Information

RCRA is primarily implemented by authorized states. Contact the state where a site is located to find out more about how the state's and EPA's regulations apply to the site. You also may visit EPA's RCRA Web site at <www.epa.gov/epaoswer/osw/index.htm> or the EPA Brownfields Web site at <www.epa.gov/brownfields>, or call EPA's RCRA Hotline at 800 424-9346 or 703 412-9810.

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EPA

RCRA Helps Turn Brownfields Green

RCRA Corrective Action



Returns Brownfields Sites



to Beneficial Reuse

What Are Brownfields?

The U.S. Environmental Protection Agency (EPA) defines brownfields sites as abandoned, idled, or underused industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination. Brownfields can be located in urban, suburban, and rural areas.



What Is EPA's Brownfields Initiative?

EPA's Brownfields Initiative is an organized commitment to help communities revitalize blighted properties—both environmentally and economically.

What Is RCRA?

The Resource Conservation and Recovery Act (RCRA) was enacted by Congress to require the safe management of municipal and industrial wastes. Some of these wastes are defined as "hazardous wastes."

The requirements of the Act are generally carried out by authorized state RCRA programs, and EPA provides oversight and support. These programs regulate hazardous waste from the point when it is first generated until is finally disposed of.

Sometimes, hazardous wastes are improperly managed and must be cleaned up. The RCRA program has a component called RCRA Corrective Action, which is the part of the program that oversees the cleanup of hazardous wastes at RCRA sites.

What Does RCRA Have to Do With Brownfields?

By making sure that wastes are properly managed, the RCRA program prevents future brownfields.

RCRA also may be involved in the restoration of existing brownfields sites. For example, many brownfields sites contain facilities that currently are—or were in the past—regulated hazardous waste treatment, storage, or disposal facilities under RCRA. Or, part of a brownfields site might not be currently regulated under RCRA, but the cleanup might involve managing RCRA hazardous wastes that were disposed of in the past.



In these cases, the site and the RCRA program can work together to find solutions to brownfields problems. Unlike the Superfund program (which primarily addresses sites that have been abandoned), the RCRA program generally works with current property owners and operators.

Remarks From EPA Assistant Administrator Tim Fields

"Cleanup and utilization of these older industrial properties offers many benefits for the environment and for our cities and communities:

- *It helps to revitalize neighborhoods and to invite commerce, recreation, and job opportunities.*
- *It curbs sprawl by encouraging the use of already developed sites over so-called 'green space' that has not been developed.*
- *It addresses the historical contamination that can be associated with older industrial properties, enabling their use for new activities while ensuring full protection of the public's health and the environment.*

"For some years now, RCRA cleanups have been known for their emphasis on long process and excruciating detail, which in too many cases meant that actual cleanups were delayed. Now EPA is making changes to the program: providing more flexible cleanup requirements; backing off of procedural requirements when they don't add value; and giving companies more leeway to try innovative approaches to remediation.

"Many people have expressed concerns about being able to redevelop RCRA sites, but actually, RCRA sites may be good candidates for redevelopment.

"Owners or operators may want to upgrade the use of their property, convert the property to other uses, or perhaps sell off part of the property for redevelopment. We can work together to do all of these things."

Brownfields Success Stories

The following examples demonstrate what can happen when site owners and operators, developers, state programs, and EPA work together to find solutions to brownfields problems.

Bethlehem Steel

Bethlehem, Pennsylvania

The Bethlehem Steel Plant, a 1,600-acre facility, may be the largest brownfields redevelopment project in the nation. This iron and steel-making plant began operations in 1857, and was once the leading steel supplier to the construction industry, but it ceased operations in 1995. Because the facility managed hazardous wastes, it had a RCRA permit, which required the owners to conduct cleanup at the site.

Traditionally, the site would follow the RCRA Corrective Action process for cleanup. That process, however, can sometimes take many years, and the owners wanted to clean the site up quickly so they could redevelop it. The facility also was eligible to participate in Pennsylvania's voluntary cleanup program, which provides release from liability to owners who clean up according to the program's standards.

To get the cleanup moving quickly, the state and EPA teamed up with the facility and developed a joint process to meet state and federal standards at the same time, using one administrative process. Because of this successful effort, the cleanup is progressing very quickly.

Parts of the property have been redeveloped as a intermodal facility for Norfolk Southern Railroad. The facility planned to transport



50,000 trailers per year, and already it appears that it will far exceed that target.

In addition, plans call for the construction of a new Smithsonian Institution National Museum of Industrial History, two ice rinks, a swimming pool, a 16-screen movie theater, a hotel/conference center, a discovery science center, restaurants, retail, and more.

EPA's Region 3 is now using this process as a model for other sites. U.S. Steel has a site where the cleanup process was moving very slowly under a RCRA order. The company has asked Region 3 to work together, using the Bethlehem Steel model to create another brownfields success story.

Allied Signal

Baltimore, Maryland

Allied Signal's Baltimore Chromium Works Plant along Baltimore's Inner Harbor produced up to 50,000 tons of chromium per year during its 140 years of operation. Although the plant ceased operations in 1985, large quantities of chromium were found to be migrating into the waters adjacent to and below the site. An estimated 50 pounds of chromium were seeping into Baltimore Harbor daily and an additional 12 pounds per day were getting into the deep groundwater on site.

The site was subject to RCRA Corrective Action cleanup requirements because, while it was operating, it had been a RCRA-permitted facility. The state of Maryland wanted to be involved in selecting the remedy for the site, so EPA, the state, and the facility worked together to craft a consent decree in 1989.

The cleanup included demolition of the old industrial plant and removal of numerous contaminants from the surface. A specially designed hydraulic barrier wall extends from the surface to bedrock, and a multi-layer cap keeps any remaining chromium in the soil from escaping. A computerized ground water monitoring and extraction system is operational.

The cleanup demonstrated:

- A high degree of collaboration between industry and government agencies.
- Innovative technical approaches to addressing complex and demanding site conditions.
- Most importantly, a significant environmental benefit for the local community.

Today, surface water samples verified by EPA and the state indicate no detectable levels of chromium are getting into the harbor, and the location now represents a redevelopment opportunity. Situated next to Baltimore's successful Inner Harbor neighborhood, the site is in a prime location. Redevelopment plans include office, residential, retail, and open space.